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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,901	07/14/2003	Robert J. Small	CHEM.006US0	7708

9629 7590 07/26/2005

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EXAMINER
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MARCHESCHI, MICHAEL A

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/619,901

Applicant(s)

SMALL ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 12-20 and 23-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-20 and 23-34 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 32 is objected to because of the following informalities:

In claims 32, "electricstatic" should be "electrostatic". Appropriate correction is required.

Claim 34 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

New claim 34 is considered to be new matter because, contrary to applicants position taken on page 14 of the response, the examiner can not find clear support for this claim. The paragraphs defined by applicants do not clearly define the claimed limitations. If the examiner is in error, the exact location where support can be clearly found is requested.

Claims 14, 25 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14 and 25 are indefinite as to the limitations thereof because the examiner is unclear as to what the claimed limitations encompasses, thus rendering the scope of the claims unclear. What are the ionic species?

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Claim 34 is indefinite because the limitation “the charge imparted by the ionization of polar groups” lacks antecedent basis because (1) a “charge from ionization of polar groups” has not been literally defined before and (2) “ionization of polar groups” has not been literally defined before.

Claims 1-7, 12-18 and 23-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1 138 733 for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 4, 8-10, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as obvious over EP 1 138 733 in view of Small et al. (039) or Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-7, 9, 12-18, 20 and 23-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1 036 836 for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 8, 10 and 19 are rejected under 35 U.S.C. 103(a) as obvious over EP 1 036 836 in view of Small et al. (039) or Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-7, 12-18 and 23-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Motonari et al. for the same reasons set forth in the previous office action which are incorporated herein by reference.

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Claims 4, 8-10, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as obvious over Motonari et al. in view of Small et al. (039) or Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-7, 9, 14-18, 20 and 25-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yano et al. (545) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 8, 10, 12-13, 19, 23-24 are rejected under 35 U.S.C. 103(a) as obvious over Yano et al. (545) in view of Small et al. (039) or Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-9, 12-20 and 23-27 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 4, 10 and 17 are rejected under 35 U.S.C. 103(a) as obvious over Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-7, 12-18 and 23-31 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ma et al. for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 4, 8-10, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as obvious over Ma et al. in view of Small et al. (039) or Small et al. (024) for the same reasons set forth in the previous office action which are incorporated herein by reference.

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New claim 32 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either (1) EP 1 138 733, (2) EP 1 036 836, (3) Motonari et al., (4) Yano et al. (545), (5) Small et al. (024) or (6) Ma et al.

With respect to this claim, applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

New claim 33 is rejected under 35 U.S.C. 103(a) as obvious over either (1) EP 1 138 733, (2) EP 1 036 836, (3) Motonari et al., (4) Yano et al. (545), (5) Small et al. (024) or (6) Ma et al.

Although the references might not define the water content of the polymer particles, it is the examiners position that absent evidence to the contrary, the polymer particles, prior to be added to the slurry, can have the claimed water content.

Applicant's arguments filed 4/28/05 have been fully considered but they are not persuasive.

With respect to the arguments based on claim 1, applicants argue that the references fail to teach the limitation "wherein the particles would in a dried state have an electrical charge. Although this may be true, the above limitation does **not** define a positive limitation in view of the way it is drafted (i.e. the phrase "would have in a dried state" does not definitely define that the particle are dry). In addition, applicants arguments are based on the **precursor** to the final composition and not on the **final** composition itself. The patentability of a final composition is

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determined on the basis of the final composition and **not** the precursor used to make the final composition. It is the examiners position that immaterial of what the state of the initial polymeric abrasive is, the **final composition** is still disclosed or suggested by the references for the reasons defined in the previous office action. Applicants provide no substantial evidence to show that the claimed **final** composition is distinguishable over the final compositions of the references). How are the final compositions different? Although the precursor used in the composition might not be defined, the instant claims are directed to a composition and **not** a precursor to that composition. Applicants also state that the amendments to claim 1 make it clear that the “particles have an external electrical charge, in addition to any charges that results from dissolution of polar groups on the surface of the particle, where the **total charge** results in he electrostatic force”. This might be applicants interpretation of the claim 1, as amended, but said claim does not literally define this and it appears that applicants are reading limitations into the claim which are clearly not supported or defined. If the claim does not literally define this, how can the above determination by applicants be argued? Applicants state that the prior art of record only have **electrical charges** resulting from the ionization of polar group within or on the surface of the particle and not one dry particles. This argument is not persuasive because, as defined before, the **final composition** is the same (reference all teach or suggest a composition comprising an aqueous solution and polymer particles, wherein the polymer particles in said solution have surface (electric) charges sufficient to create an electrostatic repulsive force between proximate particles. In addition, as defined above, the claim does not definitely define that the particles must be dry. If applicants continue the above argument, they must show how the claimed **final composition** (not the precursor used to make the final composition) patentably

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distinguishes over the prior art of record. Applicants are reminded that evidence of unexpected results is not relevant to anticipation. Ex parte A. 17 USPQ 2d 1717, 1718 (BPAI 1990); In re Malagari 182 USPQ 549 (CCPA 1974).

With respect to the arguments based on independent claim 15, applicants argue that the prior art of record fail to teach that the particles are electrified. This is not persuasive because the particle carry an electrical charge (see previous office action and page 13, lines 27-28 of the response) and the broad interpretation of “electrified” reads on an electric charge. Applicants state that this (electrified) is not related to electrostatic charges. “Electrified” and “electrostatic” both pertain to electrical charges, thus they are related to an extent. Finally, the limitation “are electrified” is a process limitations (defines how the charge is created on the particles) and as is well known process limitations to define the product in "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

With respect to the arguments based on claims 28-31, in the first paragraph under the heading “arguments with respect to claims 28-31”, applicants state that the dry particles have an electrical charge. The examiners acknowledges this, but independent claims 28 and 29 do not defined dry particles. Applicants argue that the steps in the claims require first charging the particles and then adding them to the aqueous solution. The examiner acknowledges this. With respect to the reference directed to Ma et al., applicants argue 2 reasons why this reference fails to invalidate claim 28 (and 29). To comment on the first reasons, even though the charged molecules are loosely attached, this still reads on imparting a charge to the polymeric particles because the polymeric particles will have charged molecules thereon, irrespective of how they



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are attached. Applicants have not shown any evidence to support the first argument. In addition, how can applicants state that the molecules are loosely attached? Where is this defined? Finally, applicants admission that the particles have charged molecules thereon also supports the examiners position that the particles are charged (irrespective of how they are charged).

To comment on the second reasons, applicants specifically state that the Ma et al. "teach attaching charged molecules to the surface of the particle before adding the particles to the slurry-but the particles of the reference are in an aqueous solution when the surfactant is added to the particles and this slurry of particles with a surfactant is then added to the CMP slurry. Applicants argument appears to be that the particles (of the claimed invention) are first charged and then added to the aqueous solution (i.e. CMP slurry). It would appear that applicants characterization of Ma et al., defined above, supports that the particles of the reference are first charged and then added to the aqueous solution (CMP slurry). As clearly defined on page 12, line 8 of the response, the particles are first charged and since the claims do not define that the particles are charged in a dry state, no distinction is seen to exist because the reference charges the particles with a surfactant (in a slurry) and then adds the particles to the CMP slurry (aqueous solution). Applicants clearly admit this on page 12, line 8. Finally, the imparting step of the claims reads on imparting a charge to particles (that are in a slurry) because the claims do not define anything that would preclude this interpretation.

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

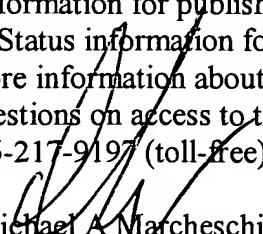
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/22/05  
MM

  
Michael A. Marcheschi  
Primary Examiner  
Art Unit 1755